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REMARKS

1. Applicant has cancelled Claims 29, 30, 31, 34, 35 and 36 solely for purposes of convenience and to expedite the subject application.

2. Applicant is of the opinion that the rejections made by the Examiner in view of US 5,579,430 are not justified.

Subsequently, Applicant will discuss the rejection against Claims 11-19, and 21-24.

All of these claims have the limitation that "spectral values" or "quantized spectral values" are scrambled or de-scrambled. For all of these claims, the Examiner has stated that the newly cited reference (Grill) discloses that spectral values or quantized spectral values are sorted or resorted.

However, Grill only discloses to position code words at synchronizing points and to fill any remaining gaps using remaining code words or parts of remaining code words. However, Grill does not disclose resorting spectral values.

Spectral values, on the one hand, and code words having variable lengths on the other hand, are different in that spectral values are the input into an entropy coder, such as a Huffman coder, while code words having variable length are at the output of such an encoder.

However, all claims clearly distinguish between spectral words on the one hand, and code words on the other hand. For an example, please refer to Claim 11, first paragraph, lines 11-12, where it is clearly outlined that there is entropy encoding performed after a scrambling operation. This definition, together with the second paragraph of Claim 11, makes it clear that the partial decoder actually performs an entropy decoding. Otherwise, the scrambled two or more spectral

values would not be there, which are defined as the output of partial decoder. Analogously, the partial encoder performs an entropy encoding operation to reverse the action performed by the partial decoder for generating the second data stream.

In all of the rejection against the above recited claims, the Examiner states that Grill expressly discloses that quantized spectral values or spectral values are resorted (see, for example, the second paragraph on page 5 of the Office Action). As outlined above, however, this is not true because Grill only discloses changing the order of the code words in the sequence. This is outlined at the following positions in Grill. First of all, please refer to column 1, line 43 stating that "words" are in a fixed raster. Furthermore, please refer to column 8, lines 18-19 or column 8, lines 23-44, where the handling of code words is described. This passage does not define any resorting of spectral values underlying the code words before the partial encoding operation. Importantly, please note that Grill clearly distinguishes between spectral values, on the one hand, and code words obtained by entropy encoding spectral values on the other hand. It is clearly stated in column 2, line 13 that there are "spectral coefficients" which are encoded by allocating code words.

In view of this, all rejections against the claims in which the spectral coefficients, rather than code words, are resorted, are not justified.

Furthermore, the Examiner's reasoning regarding the encryptor in the second paragraph of page 4 is not correct. Code book encoding using the code book key 906 has nothing to do with any sequence influencing, as clearly defined in the encryptor paragraph of Claim 11. The Examiner refers to column 14, lines 5-25. However, this operation is simply the encoding operation. Once an input value after the other is processed, a code book key is located and the code book code, corresponding to the code book key, is output. This is a straightforward operation which is performed by an entropy encoder. However, a sequence is not

influenced based on a key. The Examiner is of the opinion that the "code book key" as stated in box 906 in Fig.14 is an encryption or decryption key. However, when one looks at a code book having an input value and a corresponding output value, then this input value is also termed as a "code book key" or "code book index," which corresponds to the output code word. When, for example, newly cited Grill is considered, the code book key would be, for example, in the table bridging column 2 and column 3, a number as indicated in the column "value," and a corresponding code word in the same line as the corresponding "value" would be the code book code corresponding to the code book key.

In view of this, Chen does not disclose - with respect to Claim 11 - the decryptor and the encryptor. Furthermore, and importantly, Chen does also not disclose that there is a first data stream encrypted based on a first key as stated in the first three lines of Claim 11. Although this definition is in the preamble of Claim 11, the second paragraph of Claim 11 clearly states that the result of the partial decoder are the scrambled two or more spectral values. However, Chen is completely silent about scrambling, and therefore, does not disclose that the partial decoder outputs scrambled two or more spectral values. The partial decoder output, as recited by the Examiner, is simply a sequence of non-scrambled two or more spectral values.

Item 57 in Fig. 12 of Katta is an XOR device performing a bit-by-bit XOR operation between the key bit and the value bit provided by element 52. Thus, an XOR operation is performed by Katta. However, the Examiner is not correct when stating that a decryption is performed "by reversing the resorting based on the first key." A bit-by-bit XOR operation is different from an operation in which values are resorted in sequence. Please refer to column 11, line 61, which explicitly states that item 57 is an exclusive XOR circuit. Such a device can never perform a resorting of any input. Instead, a bit-by-bit XOR operation between two bits input into device 57 is performed. Even when the output of the shifter 52 is spectral values, these spectral values would not be resorted, as clearly defined in

the claim. Therefore, the Examiner's statement on page 4, fifth paragraph, is not correct.

Regarding the reasoning suggested by the Examiner on page 5, please refer to the remarks above on Grill. In view of this, even when those skilled in the art would combine all three references, the result would not be a partial decoder that outputs two or more scrambled spectral values, as defined in the second paragraph of Claim 11.

Furthermore, a decryptor does not exist in all these references which performs reversing the scrambling comprising resorting the spectral values, as defined in the third paragraph of Claim 11. Additionally, the encrypter feature is also not disclosed, because there is no reference which performs an encryption, which is an influencing of the sequence comprising resorting of the spectral values in accordance with an encryption key. Finally, all these references are completely silent about the specific resorting to be performed only within spectral areas having the same code book associated therewith.

Regarding the other claims rejected to by the Examiner as having similar features as Claim 11, the same arguments apply. These claims are Claims12-19 and 21-24.

Claims 28 and 33 neither have the limitation that spectral values or quantized spectral values are resorted nor say that something like that is done only within a certain spectral area. Nevertheless, those claims are also inventive.

However, the specific features of Claim 28 and 33 are that two different keys are used, *i.e.* a first key when generating the first data stream as stated in the third line of Claim 28. This first key is necessary for the decryptor for reversing the scrambling by changing the order of the code words in the scrambled sequence, as defined in the third paragraph of Claim 28. Furthermore, Claim 28 defines that

there is a second key for scrambling the sequence of code words by changing the order of the code words in accordance with this second key - and not in accordance with the first key.

Subsequently, Applicant discusses the Examiner's statements regarding Claim 28. Again, the Examiner is not correct when stating that the decoder of Chen corresponds to the partial decoder of the present invention, because the output of Chen's decoder is not a code word, but the result of decoding, which is the "original quantization output for the input series" as stated in the last two lines of column 5. Claim 28 clearly states that the output of the partial decoder, in accordance with Claim 28, is a scrambled sequence of code words. However, the output of Chen's decoder is the approximation of the original quantization output, *i.e.* the decoded code word. The Examiner argues that the output of a decoder is the same as the input of a decoder, which is erroneous. Furthermore, even when one would say that the output of a decoder is the same as the input of a decoder, Chen does not disclose any scrambled sequence, for which scrambling is based on the first key, as defined in the last three lines of the first paragraph of Claim 28. Thus, the decoder of Chen is different from the partial decoder of Claim 28.

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Regarding the decryptor, the Examiner points to Katta. As stated above, Katta discloses a descrambler, but a descrambler performing an XOR operation on a bit-by-bit-basis in block 57, which can not result in the changing of an order of code words in the scrambled sequence. Then, the Examiner states that the code book key item 906 of Chen corresponds to the encryptor. However, as stated above, this feature has nothing to do with the changing of an order of code words, but is the straightforward encoding operation in an encoder which is based on a codebook.

Regarding the partial encoder feature, the Examiner points to the encoder of Chen. However, the Examiner is again not logical, when saying that the entropy

encoder, which outputs code words corresponds to the partial encoder of Claim 28, which receives, as an input, code words. The fact that the partial encoder of Claim 28 receives, as an input, code words become clear from the fact that this device performs part of the encoding that has been done by the partial decoder, because the partial decoder outputs code words, and the partial encoder receives, as an input, code words, but the encoder of Chen outputs code words and does not receive any code words as an input.

In view of that, neither Chen nor Katta disclose the partial decoder, the decryptor, the encryptor or the partial encoder.

The Examiner also cites Grill. However, Claim 28 clearly states that there is a first key and that there is a second key and that reversing the scrambling, which is based on the first key, actually comprises changing the order of code words in the scrambled sequence based on the first key.

Grill is silent on using any key for positioning code words on the raster points. According to positioning of code words at raster points or synchronizing points, this reference states that one has to place the first 10, for example, code words on synchronizing points, when one has 10 synchronizing points. This becomes clear from the second line in the description of Fig. 2. Additionally, in column 9, lines 27 to 30, it is outlined that "important portions of information" are arranged in this fixed raster.

Thus, it is clear that any changing of an order of code words in Grill is not performed based on a first key or second key, but is simply performed based on the information itself, whether the information is important or not, or whether the code words are the first code words in a sequence or not. This, however, has nothing to do with the decryption operation in accordance with the first key and an encryption operation in accordance with a second key. Even when one would say that how the code words are positioned in the raster corresponds in any way

with a key, then one would only have a single key, rather than a first key and the second key. Stated differently, Grill only knows a single resorting operation, but does not disclose having two different resorting operations based on the first or a second key.

In view of the above, the claims are deemed to be allowable and withdrawal of the rejections is earnestly solicited. Should the Examiner deem it helpful, he is encouraged to contact Applicant's attorney, Michael A. Glenn, at (650) 474-8400.

Respectfully submitted,

Michael A. Glenn
Reg. No. 30,176

Customer No. 22862